

ABSTRACT

A reactor, in particular for exothermic reactions, of the type including: a shell (2) of substantially cylindrical shape, at least one catalytic bed (3) in the shell, including a perforated cylindrical outer side wall (4), which forms a free space (8) with the shell, and an inner side wall (5) coaxial to the previous one, a heat exchanger (13) in the bed (3), the heat exchanger (13) being formed by a plurality of tubes (15) in the form of a spiral, a coil or alike in fluid communication with feed and discharge collectors (14, 16) for a cooling fluid.